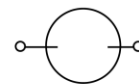


The Making of "Hitman: Codename 47"



Thomas Jakobsen
Head of R&D



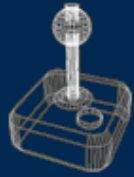
Io-Interactive

Computer Games & Digital Textualities, March 1, 2001

Overview

- Introduction
- IO Interactive
- Hitman: Codename 47
 - Storyline
 - Graphics
 - Gameplay
 - Technology
- Demonstration
- Final remarks





IO Interactive

- Founded by Reto-Moto and Nordisk Film in '98.
- Focuses on original character-based games for PC and consoles.
- Grown gradually from the initial 7 full-time employees to the current 43.
- "Hitman: Codename 47" first project – PC version published Christmas 2000.

Hitman: Codename 47



- Character-based action adventure.
- A mix of stealth, strategy, and shooting.
- Missions tied together by an underlying story.
- Built on top of a proprietary game engine.
- Released Christmas 2000. Appeared on top-10 charts in both U.S., U.K., and Germany.

STRENGTH
HEALTH
ARMOR

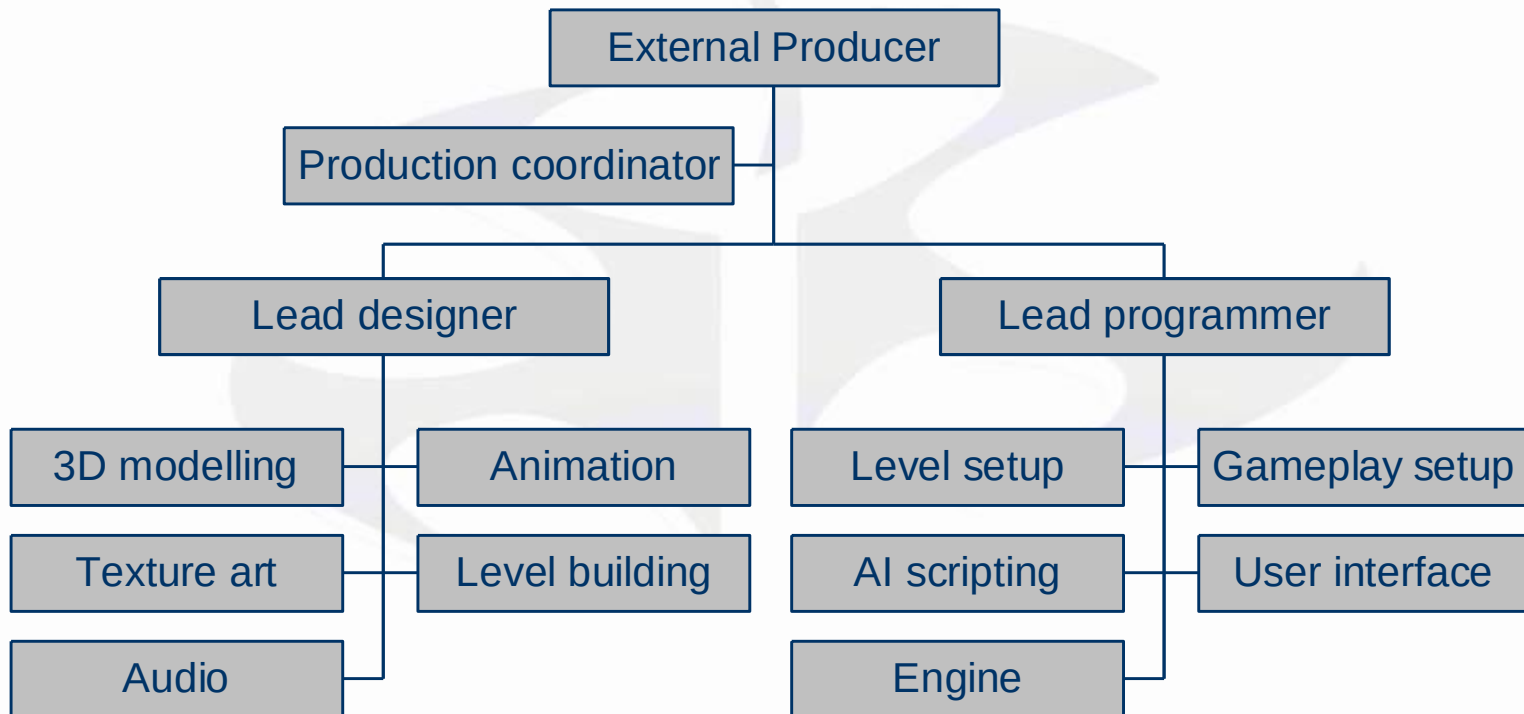


The Process of Creating a Game

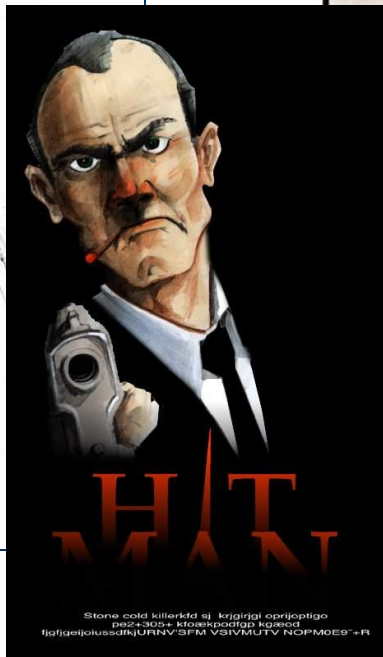
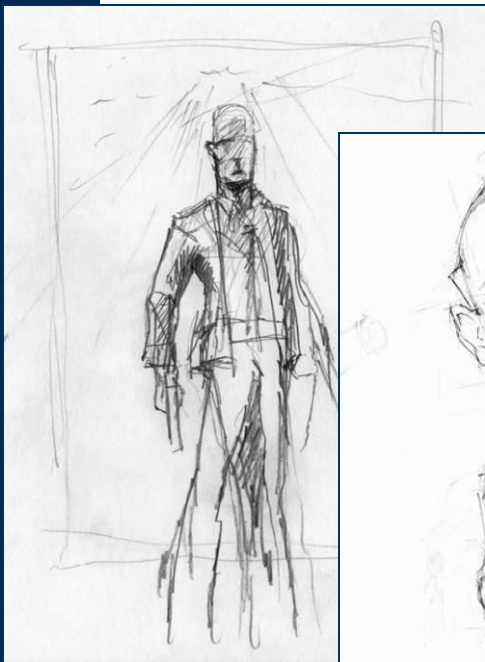
- Idea stage
 - Establishing graphical style
 - Gameplay sketch
 - Basic storyline
- Prototyping/creating 1st demo
 - Finishing design document
 - Contacting a publisher
- Preproduction
 - Maturing technology
 - Experimentation with gameplay and UI
- Production
 - Content creation (graphics, sound, scripts)
- Crunch period
 - Putting everything together
 - Fixing final errors
 - Quality assurance
- Release
 - **Party!**
- Follow-up
 - Patches
 - Press

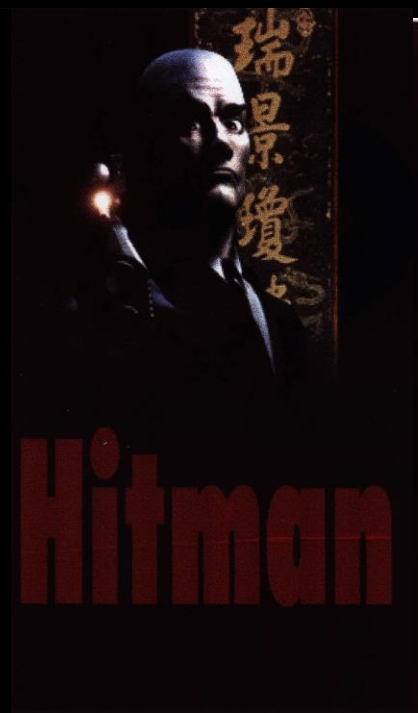
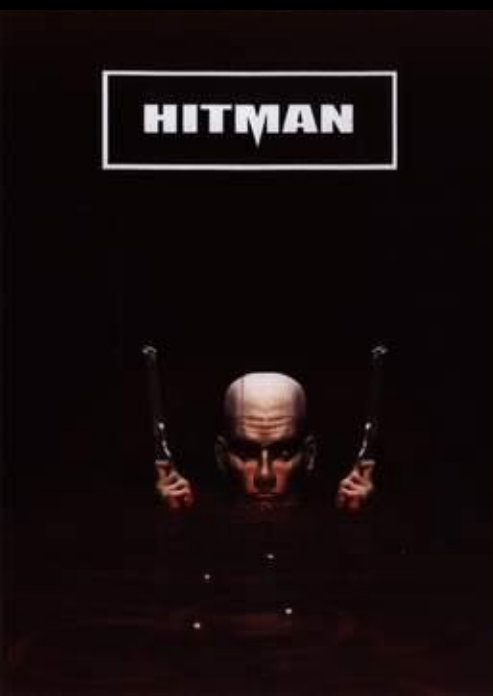
Putting It All Together

Production Line - The Team



Character Development

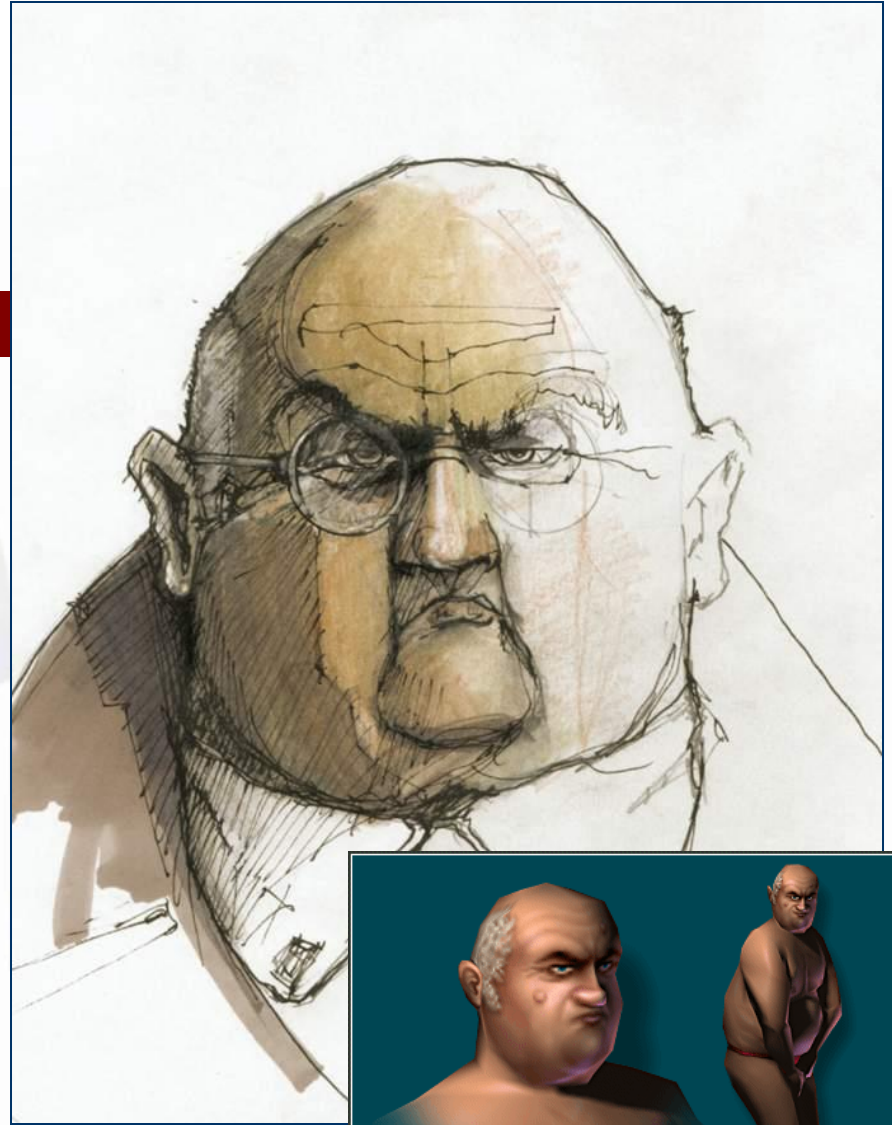




Hitman in His Final Form



Supporting Characters



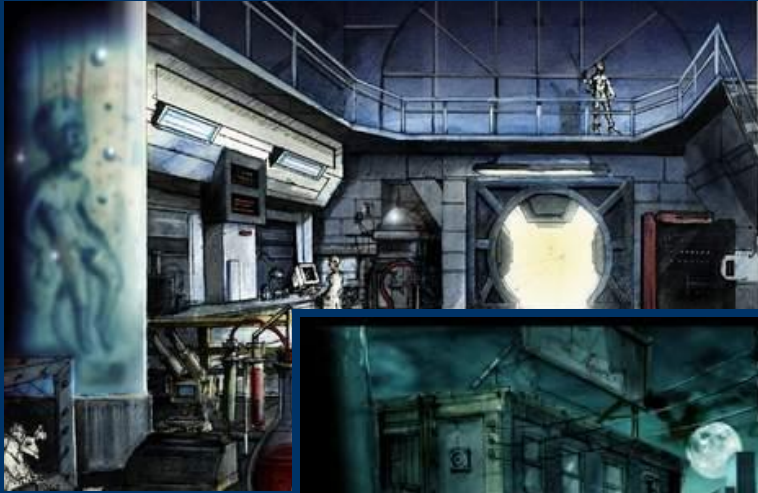
In-game Characters



Animation Studies



Locations





Hitman Screen : C3-1



Weapons



Developing the Storyline

- Brainstorm sessions
- Story group meetings
- External professional script author
- Dialog
- Storyboard

Storyboard

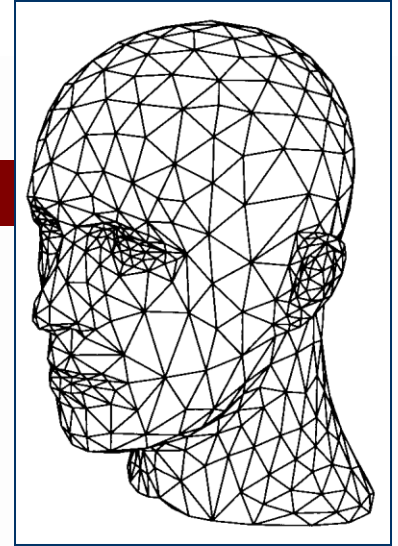


Developing Gameplay

- Find the right combination of gameplay elements
 - Shooting and fighting (combat action)
 - Sneaking and hiding bodies (stealth)
 - Disguising by wearing enemy clothes (stealth)
 - Choosing the right weapons (planning)
 - Pre-mission laptop briefings (planning)
 - Misc. small puzzles (thinking)
- Construct levels by combining elements
- An iterative process of experimentation

Graphics

- 3D models
 - Buildings, furniture, weapons etc. (3ds max)
- Textures
 - Photos, hand-drawn (PhotoShop)
- Animation
 - By hand (3ds max)
 - Motion capture
- Level design
 - Assembling 3D models in custom editor (RetoEto)



Perspective



Dynamics

Measure

Motion Capture

Reset XForm

MAXScript

Polygon Counter

Render Settings

Reto-Moto Render

SourceControl

Render

reto-moto

Reto-Moto Render Engine

Render

☒ World

☐ Master

Render

Stop View

Animation file

Test

Animation

Collapse

Current World

TrainWagon_01

Check In

Check Out

Add File

Include

☒ All

☐ Visible

☐ Selected

Converters

☒ Force Rerender

☒ Grids

☒ Big Lights

☐ Wink

Task

None

None

Settings

Preferences

About

0 / 100

None Selected

Click or click-and-drag to select objects

X: -7.251m Y: 2.622m Z: 0.0m Grid = 0.254m

Add Time Tag

Animate

0

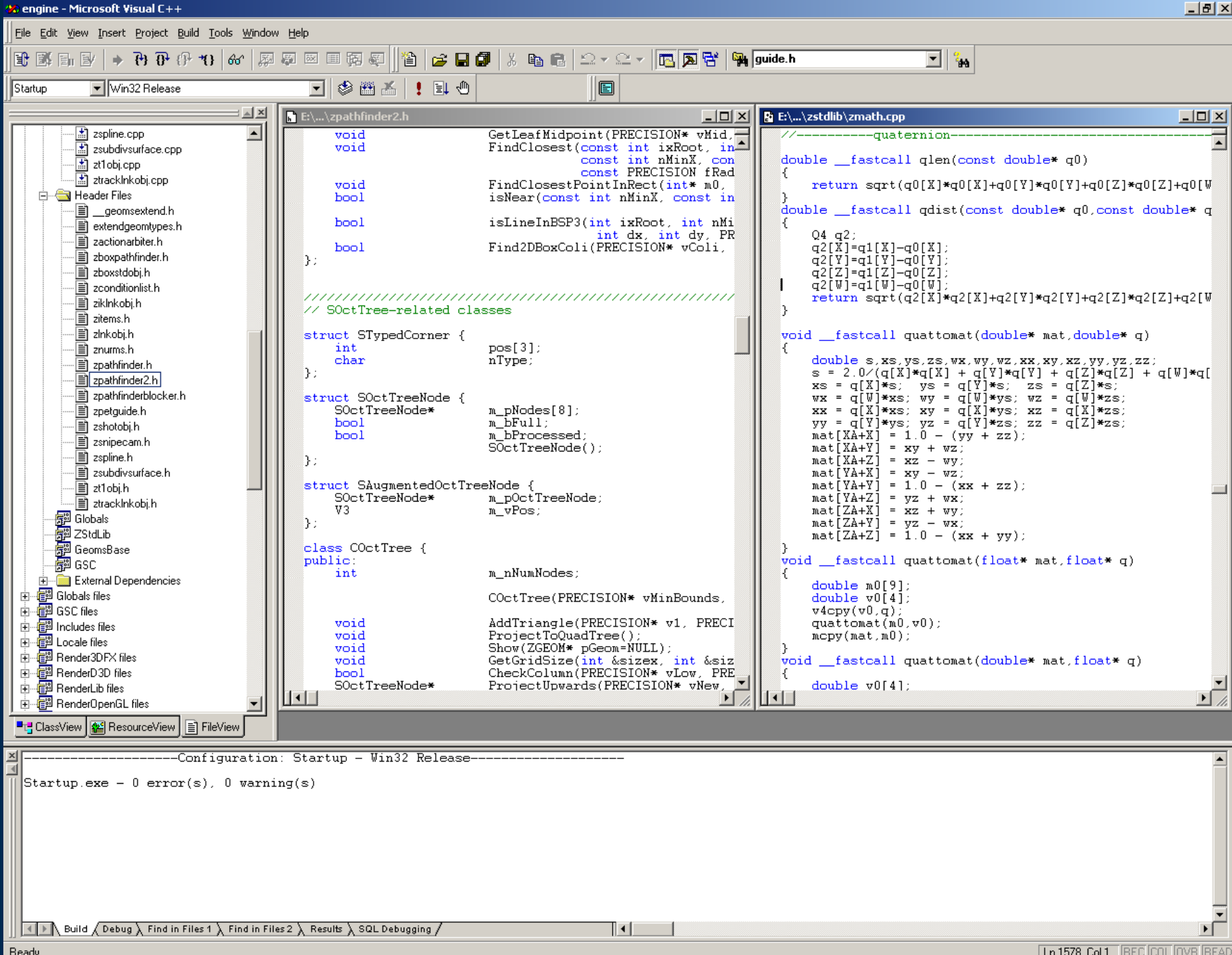




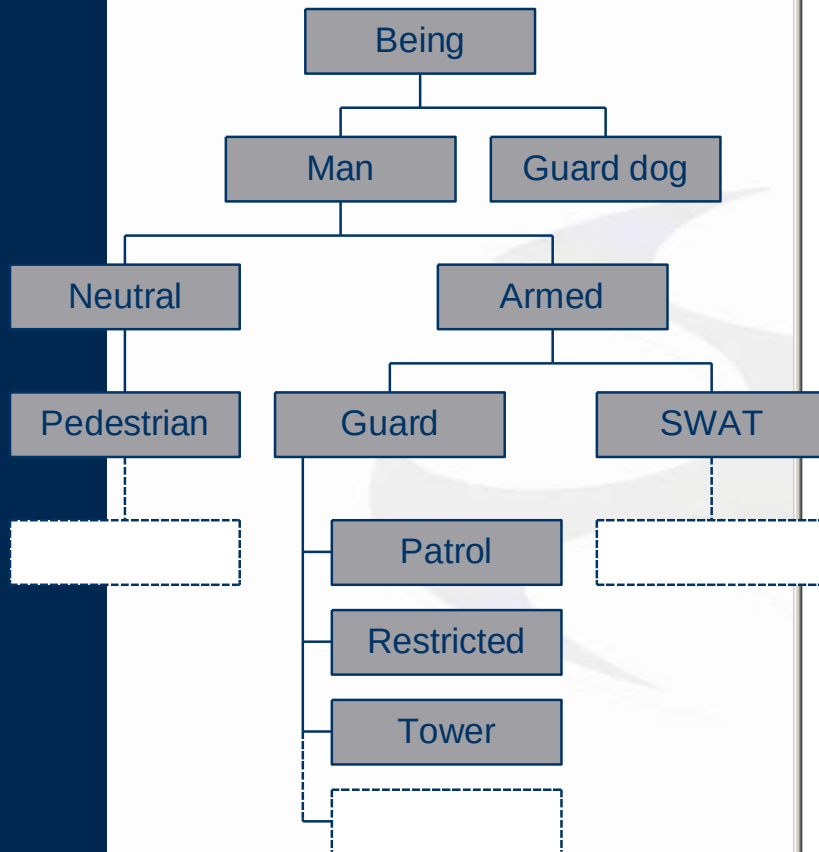


Technology – the Glacier Engine

- State-of-the-art 3D rendering
- Visual, object-oriented editor
- Advanced skeletal animation
- Precise collision handling
- Advanced physics simulation
- State-based, event-driven scripting language for AI
- Automatic pathfinder
- 3D sound
- Localization editor
- Tool integration w/source control



Scripts



Guard.sdl - WordPad

File Edit View Insert Format Help

#include "Armed.sdl"

InEvent QueryAttackTarget;

Script Guard extends ArmedPerson {

NativeImport {

Ref GuardPoint;

float MinAlertNess =

ActionArbiter Ctrl;

int Mute=0;

}

////////////////////////////////////

// Help request info

HelpRequest tHelpRequest;

string sGuardDress;

Position startPos;

float startTime;

float AlertNess; // percent

float fAttackedPatience;

int rHitFriend;

SoundInfo ShotInfo;

SoundInfo DieInfo;

int iStatus = 0; // 0-Idle, 1-Engaged, 2-Investigating

////////////////////////////////////

// Target info

string sTargetDressName;

bool bTargetRecognized = false;

int iRefTarget = 0;

////////////////////////////////////

// Suspect info

int iRefSuspect = 0;

Position tLastSuspectPos;

StateRef desiredState = guard;

float fAlertVisRange = 50.0;

float fRelaxedVisRange = 30.0;

float fAlertVisSpeed = 50.0;

float fRelaxedVisSpeed = 2.0;

int rDeadBody;

For Help, press F1



HEALTH 100
ARMOR 70

INFORMATION
TARGET IS LEAVING THE RESTAURANT

HARDBALLER
CLIP 7
TOTAL 1000

CUTSEQUENCE TIME 14.48 SEC (362.95 FRAMES)

PROCESS 0.000 / 0.000 INTERNAL 20.081 / 27.639 : 0.860 COUNT 55146
FC 5155 FPS 170 (85Hz) TEX 0 LGT 0.009 0.5RM 0

External Work

- Manuscript
- Music
- Motion capture
- Voice acting
- Quality assurance (partly inhouse)
- Localization (publisher)
- Producer (publisher)
- Marketing (publisher)
- Distribution (publisher)

Hitman Demonstration



[Start](#)



Any questions?

EIDOS io-Interactive

For a copy of the slides visit www.ioi.dk/~tj and www.hitman.dk.